

In the Claims

Please cancel claims 1-18 and add the following new claims.

- 19. A process for the preparation of 1,1,1,3,3-pentafluoropropane which comprises
 - (a) carrying out a catalytic hydrofluorination reaction of a product of partial fluorination of 1,1,1,3,3-pentachloropropane to form 1,1,1,3,3-pentafluoropropane and hydrogen chloride;
 - (b) drawing off 1,1,1,3,3-pentafluoropropane and hydrogen chloride in a gaseous phase as each of said 1,1,1,3,3-pentafluoropropane and hydrogen chloride is being formed.
- 20. The process of claim 19, wherein the product of partial fluorination of 1,1,1,3,3-pentachloropropane is a chlorofluoropropane.
- 21. The process of claim 19, which further comprises recycling of hydrogen fluoride reactant to the hydrofluorination reaction.
- 22. The process of claim 19, wherein 1,1,1,3,3-pentachloropropane is reacted with hydrogen fluoride in the catalytic hydrofluorination reaction.
- 23. The process of Claim 19, which comprises conducting the reaction continuously in a liquid phase and maintaining a molar ratio of the catalyst to 1,1,1,3,3-pentachloropropane maintained from 0.001 to 1,000.
- 24. The process of Claim 19, wherein the molar ratio of the catalyst to 1,1,1,3,3-pentachloropropane is greater than 0.5.
- 25. The process of Claim 19, wherein from 5 to 100 moles of hydrogen fluoride are used per mole of 1,1,1,3,3-pentachloropropane.

26. The process of Claim 22, wherein the 1,1,1,3,3-pentachloropropane is prepared by reaction between vinyl chloride and tetrachloromethane.
27. The process of claim 19, wherein the hydrofluorination reaction is carried out at a temperature and under a pressure at which 1,1,1,3,3-pentafluoropropane is gaseous.
28. The process of claim 19, wherein the hydrofluorination reaction is carried out in the liquid phase.
29. A process for the preparation of 1,1,1,3,3-pentafluoropropane which comprises
 - (a) reacting hydrogen fluoride with pentafluorochloropropane to form 1,1,1,3,3 - pentafluoropropane and hydrogen chloride;
 - (b) drawing off 1,1,1,3,3-pentafluoropropane and hydrogen chloride in a gaseous phase as each of said 1,1,1,3,3-pentafluoropropane and hydrogen chloride is being formed.
30. The process of Claim 19, wherein the hydrofluorination catalyst is selected from the group consisting of derivatives of metals of Groups IIIa, IVa, IVb, Va, Vb and VIb of the periodic table.
31. The process of Claim 19, wherein the hydrofluorination catalyst is a derivative of a metal selected from the group consisting of titanium and tin.
32. The process of Claim 19, wherein the pentachloropropane is reacted with hydrogen fluoride in the presence of a hydrofluorination catalyst.
33. The process of Claim 19, wherein the hydrofluorination catalyst is selected from the group consisting of tin and antimony chlorides, fluorides and chlorofluorides.
34. The process of Claim 19, wherein the catalyst is antimony pentachloride.
35. A process for the preparation of 1,1,1,3,3-pentafluoropropane which comprises carrying out a catalytic hydrofluorination reaction of a reactant selected from 1,1,1,3,3 -